

WHAT IS CLAIMED IS:

1. A method of lighting a road scene with a vehicle headlight, including the following operations:

- detecting in the road scene at least one person,
- 5 - pinpointing the location of this person in the road scene,
- creating, on an imager, a mask having dimensions and position corresponding to the person, and
- illuminating the road through the imager, so creating a projected shadow around the person.

10 2. A method of lighting according to Claim 1 which illuminates a zone of the road scene situated above a cut-off line.

3. A method of lighting according to Claim 1, wherein the detection of the person comprises taking an image of the road scene with thermal detection of the person.

15 4. A method of lighting according to Claim 1, wherein detection of the person comprises taking an image of the road scene with detection of movement of the person.

5. A method of lighting according to Claim 1, wherein the pinpointing of location, and mask creation, are obtained by image processing.

20 6. A method of lighting according to Claim 1, wherein the pinpointing of location consists in applying a threshold-value technique to the image of the road scene.

7. A method of lighting according to Claim 6, wherein the application of threshold value comprises forming an image at two levels, black and white, of the image of the road scene.

5 8. A method of lighting according to Claim 7, wherein the creation of the mask comprises applying, in inverse video on the imager, the image to which the threshold-value technique has been applied.

9. A method of lighting according to Claim 6, wherein the creation of the mask includes convolution, by means of a convoluting element, of the image to which the threshold-value technique has been applied.

10 10. A method of lighting according to Claim 1, wherein creation of the mask is performed in real time.

11. A main beam headlight for a vehicle, comprising a first light source and a system for modulating the light therefrom, wherein the modulating system comprises an imager, a light guide for transporting the light from
15 the light source to the imager, and an electronic system for generating masks on the imager for blocking light.

12. A headlight according to Claim 11, wherein the imager comprises a matrix of liquid crystal systems which are electrically controllable, or a matrix of lenses, the focal length of which is capable of being modulated
20 by electrical control.

13. A headlight according to Claim 11, wherein the light guide comprises at least one matrix of optical fibres or an optical fibre of large cross section.

14. A headlight according to Claim 11, wherein the light guide comprises
25 a first light path for guiding the light towards the imager, and a second light path for guiding the light towards an optic adapted for diffusing the light.

15. A main beam headlight for a vehicle, comprising a first light source and a system for modulating the light therefrom, wherein the modulating system comprises an imager comprising a matrix of lenses, the focal length of which is able to be modulated by electrical control, and an
5 electronic system for generating masks on the imager for blocking light.
16. A headlight according to Claim 11, including a second light source independent of the first light source and providing main beam or cruising illumination.
17. A headlight according to Claim 11, wherein the electronic system is
10 controlled by a means for detecting persons.
18. A headlight according to Claim 17, wherein the detection means is a thermal camera.
19. A headlight according to Claim 17, wherein the detection means is an infrared camera.
- 15 20. A headlight according to Claim 11, wherein the light guide includes, upstream of the imager, means for making the distribution of the light in the imager homogeneous.
21. A headlight according to Claim 20, wherein the means for making the light homogeneous is a block or bar of quartz or glass.
- 20 22. A headlight according to Claim 11, including a lens for diffusing the light downstream of the imager.
23. A headlight according to Claim 11, wherein the first light source is located in a housing outside the modulating system.